Entergy

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Peter J. Miner
Manager, Regulatory Assurance

10 CFR 50.73

2.19.042

June 11, 2019

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Licensee Event Report 2019-004-00, Manual Reactor Scram Due to Degrading Condenser Vacuum

Pilgrim Nuclear Power Station
NRC Docket No. 50-293
Renewed Facility Operating License No. DPR-35

The enclosed Licensee Event Report 2019-004-00, Manual Reactor Scram Due to Degrading Condenser Vacuum, is submitted in accordance with Title 10 Code of Federal Regulations 50.73.

If you have any questions regarding this information, please contact me at 508-830-7127.

This letter contains no new regulatory commitments.

Sincerely,

Peter J. Miner

PJM/rjm

Enclosure: Licensee Event Report 2019-004-00, Manual Reactor Scram Due to Degrading Condenser Vacuum

cc: NRC Region I, Regional Administrator
NRC NRR Project Manager - Pilgrim
NRC Senior Resident Inspector - Pilgrim

Enclosure

2.19.042

Licensee Event Report 2019-004-00, Manual Reactor Scram Due to Degrading Condenser Vacuum

8NRC FORM 366 (04-2017) U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020
LICENSEE EVENT REPORT (LER) (See Page 2 for required number of digits/characters for each block) (See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)	Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Pilgrim Nuclear Power Station	05000-293	1 OF 3

4. TITLE Manual Reactor Scram Due to Degrading Condenser Vacuum

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
									N/A	N/A
05	17	2019	2019	- 004	- 00	06	11	2019	FACILITY NAME	DOCKET NUMBER
									N/A	N/A

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
N	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☒ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. POWER LEVEL	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
70	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(i)
	☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(ii)
		☐ 50.73(a)(2)(i)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER *(Include Area Code)*
Mr. Peter J. Miner - Regulatory Assurance Manager	508-830-7127

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
X	KE	MO	H200	Y					

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO				

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On Friday, May 17, 2019 at 2303 [EDT], with the reactor at approximately 70% core thermal power, Pilgrim Nuclear Power Station initiated a manual reactor scram due to degrading condenser vacuum as a result of the trip of Seawater Pump B. Investigation into the cause identified the Seawater Pump B breaker ground sensing relay in the tripped state.

Following the Seawater Pump B trip and reactor scram, Main Condenser parameters responded as expected to a loss of seawater pump transient, no anomalies were noted. There were no radiological releases due to this event. All control rods inserted fully. All other plant systems responded as designed.

This event had no impact on the health and/or safety of the public.

This report is submitted in accordance with 10 CFR 50.73(a)(2)(iv)(A).

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
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NARRATIVE

BACKGROUND

During planned operation, steam from the low pressure turbine is exhausted directly downward into the condenser shells through exhaust openings in the bottom of the turbine casings. The objective of the main condenser is to provide a heat sink for the turbine exhaust steam, turbine bypass steam, and other flows. The heat dumped to the main condenser is removed by the Circulating Water System, also called the Seawater System. The water is pumped from and returned to Cape Cod Bay. Two vertical, removable element seawater pumps located in the intake structure provide a continuous supply of condenser cooling water. The pumps have a rated flow of 155,500 gal/min each and are powered by 1250 hp, 4160 V, 3 phase induction motors. The design seawater circulating water flow rate is 311,000 gal/min.

EVENT DESCRIPTION

On Friday, May 17, 2019 at 2303 [EDT], with the reactor at approximately 70% core thermal power, Pilgrim Nuclear Power Station initiated a manual reactor scram due to degrading condenser vacuum as a result of the trip of Seawater Pump B. Following the Seawater Pump B trip and reactor scram, Main Condenser parameters responded as expected to a loss of seawater pump condition.

During the manual reactor scram, the plant experienced a Group 2 Isolation, Miscellaneous Containment Isolation Valves, and a Group 6 Isolation, Reactor Water Clean-Up Reactor Building Isolation Actuation, as designed.

CAUSE OF THE EVENT

Investigation into the cause identified the Seawater Pump B breaker ground sensing relay in the tripped state. The cause of the Seawater Pump B motor trip was a failed power supply cable. High resistance on the degraded 4160 volt motor lead connection caused overheating of the insulation, which eventually faulted to ground causing the pump to trip.

CORRECTIVE ACTIONS

The Seawater Pump B motor power supply cable was repaired. Any further corrective actions will be documented in the corrective action program.

SAFETY CONSEQUENCES

There were no actual consequences to safety of the general public, nuclear safety, industrial safety, or radiological safety for this event.

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		YEAR	SEQUENTIAL NUMBER	REV NO.
Pilgrim Nuclear Power Station	05000- 293	2019	- 004	- 00

REPORTABILITY

This report is submitted in accordance with 10 CFR 50.73(a)(2)(iv)(A), Any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B) of this section including 50.73(a)(2)(iv)(B)(1), Reactor Protection System.

PREVIOUS EVENTS

There have been no events reported in the last three years related to the Seawater Pumps.

REFERENCES

CR-PNP-2019-02882